

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

January 23, 2013

Via E-Mail

Robert Claassen, Esq. Paul Hastings LLP 1117 S. California Avenue Palo Alto, CA 94304

Re: Vermillion, Inc.

Amended Preliminary Proxy Statement on Schedule 14A

Filed on January 18, 2013

File No. 1-34810

Dear Mr. Claassen:

We have reviewed your filing and have the following comments.

Please respond to this letter by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Schedule 14A

General

1. We note that you state that Mr. Goggin was found by the Delaware Chancery Court to have "illegally falsified documents" and "otherwise engaged in litigation misconduct." Please revise to avoid issuing statements in your soliciting materials that directly or indirectly impugn the character, integrity or personal reputation or make charges of illegal, improper or immoral conduct without factual foundation. Disclose the factual foundation for such assertions or delete the statements in future solicitations. In this regard, note that the factual foundation for such assertions must be reasonable. Refer to Rule 14a-9.

Robert Claassen, Esq. Paul Hastings LLP January 23, 2013 Page 2

Quorum Abstentions; Broker Non-Votes, page 2

2. Please revise the last paragraph regarding broker non-votes since the proxy solicitation is contested and broker non-votes will not be counted for quorum purposes.

Proposal Four: Approval of an Amendment and Restatement..., page 40

3. We note your response to comment four in our letter dated May 22, 2012. Please revise to include the tabular information required by Item 10(a)(2) of Schedule 14A.

Please direct any questions to me at (202) 551-3411. You may also contact me via facsimile at (202) 772-9203. Please send all correspondence to us at the following ZIP code: 20549-3628.

Sincerely,

/s/ Peggy Kim

Peggy Kim Special Counsel Office of Mergers & Acquisitions